

UNIVERSITY OF TECHNOLOGY, SYDNEY

Successful Transition to Mobile Government (m-Government) An Adaptive Framework

A thesis submitted by **Shadi Al-khamayseh**
in fulfilment of the requirements for the award of the degree
Doctor of Philosophy in Computer Systems

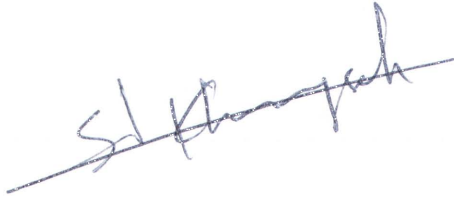
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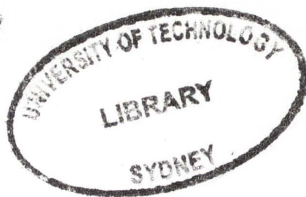
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Shadi Al-khamayseh



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Publications supporting this research

The following publications published in peer-reviewed conferences are directly related to this research:

- Al-khamayseh, S. & Lawrence, E. 2005, '**Mobile Government** - Converging Technologies And Transition Strategies', *DEXA 2005*, Copenhagen, Denmark, pp. 358-365.
- Al-khamayseh, S. & Lawrence, E. 2006, '**M-Government** Success Factors: A Roadmap for Developing Interactive Mobile Government', *DEXA 2006*, Krakow, Poland
- Al-khamayseh, S. & Lawrence, E. 2006, 'Towards Citizen Centric **Mobile Government Services**: A Roadmap', *Collaborative Electronic Commerce Technology and Research*, Basel, Switzerland.
- Al-khamayseh, S., Hujran, O., Aloudat, A & Lawrence, E. 2006, '**Intelligent Mobile Government**: Application of Personalisation and Location Awareness Techniques', *Second European Conference on Mobile Government*, Brighton, UK.
- Al-khamayseh, S., Lawrence, E. & Zmijewska, A. 2006, 'Towards Understanding Success Factors in Interactive **Mobile Government**', *Second European Conference on Mobile Government*, Brighton, UK.
- Al-khamayseh, S., Lawrence, E., Zmijewska, A., & Culjak, G. 2007, 'Mobile Learning Systems for Digital Natives', *Sixth IASTED International Conference on Web-based education*, Chamonix, France.

Abstract

Over the past decade Governments all over the world have been moving towards providing services to their citizens via the web, with varying degrees of success. These e-Government initiatives have been the subject of extensive research. This research is concerned with the transitioning from e-Government to mobile government (m-Government). Mobile government implementation is still in its very early stages – indeed a perfect m-Government Framework/model has not yet been created. This research aims to contribute to the field by developing a successful m-Government framework as a basis for a transition methodology, either from e-Government to m-Government or directly to m-Government.

Transitioning from e-Government to m-Government requires researching the integration process between e-Government and m-Government. It also requires investigation of all the pressures, obstacles that hinder the transition process and m-Government success factors. Such obstacles and success factors differ between nations, such as a nation's technological and information infrastructure, mobile device penetration and acceptance, public and social pressures, and security. Finally an m-Government initiative must be developed followed by an m-Government strategy.

Mobile devices have the potential to become ideal access devices because they are small, light, personal, convenient, and many people carry them all the time, everywhere. Mobile devices have a number of connectivity options, and their own display and input capabilities. They are already widely used around the world.

Mobile Government, despite its potential, has not reached anticipated adoption levels. While there may be many reasons for this, limited previous research has focused on only a few topics, mainly technology and consumers. The main aim of this study is to discover what is necessary to improve the adoption and implementation of mobile government systems. Specific objectives that were proposed to help achieve this aim included: a) identifying all the factors that may influence adoption and implementation of mobile services, b) integrating such factors and relations between them in a framework, and c) providing specific recommendations and guidelines in all the various perspectives.

Case studies were the methodology employed to fulfil these objectives. A qualitative approach was found to be most suitable to this study, and open-ended Web surveys, as well as various kinds of interviews, including email, face-to-face, and phone, were used to obtain detailed, in-depth information from industry and user participants.

The main contribution of this study is the adaptive theoretical framework that explains the specific factors that influence the adoption, diffusion and implementation of mobile government systems. It provides interesting findings on each of the identified factors, and at the same time integrates such investigations as one coherent whole that forms a framework of success factors for mobile government systems.

Some of the discovered factors have never before been proposed. Others have been proposed in fragmented explanations that focused on several influences only. Yet other factors have been proposed before, but this study offered more

accurate or understandable interpretations or names for them. In addition, this study integrated all the factors in a framework, pointing out the important contexts and conditions that need to be understood and fulfilled.

Another contribution can be found in the multitude of specific guidelines and recommendations that have been discovered in the participants' data. This study additionally devoted much attention to studying international mobile governments. The proposed framework with its well explained success factors can be used by traditional or electronic governments to improve their current work processes through the new mobile and wireless technologies.

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